APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,649	05/29/2002	Martin Vorbach	2885/56	8424

26646 7590 01/03/2007	EXAMINER
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ART UNIT	PAPER NUMBER
2192	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/009,649	VORBACH ET AL.
	Examiner	Art Unit
	Thuy Dao	2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 September 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

    4a) Of the above claim(s) <u>182</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>179-181 and 183-203</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>May 29, 20002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/8/04, 10/10/01, and 9/28/06</u>

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the amendment filed on September 28, 2006.

2. Claims 179-181 and 183-203 have been examined.

Response to Amendments

3. Per Applicants' request, claims 179-181, 190, and 194 have been amended and claim 203 has been added.

4. The objection to drawings is withdrawn in view of Applicants' amendments. The Examiner acknowledges receipt of replacement drawings.

5. The objection to the specification and claims is withdrawn in view of Applicants' amendments.

Information Disclosure Statement

6. The examiner apologies for not initialing EP 0 221 360, listed in page 7 of the 1449 paper mailed October 8, 2004, and CE 196 51 075, listed in page 1 of the 1449 paper mailed December 10, 2001. In this Office Action, the references have been considered and initialed.

7. The Office acknowledges receipt of the Information Disclosure Statement filed on September 28, 2006. It has been placed in the application file and the information referred to therein has been considered by the examiner.

Response to Arguments

8. The Applicants are thanked for a thorough reply. Applicants' arguments with respect to claims 179-181 and 183-203 have been considered but are moot in view of the new ground(s) of rejection.

9. The Applicants added new limitations to independent claims 179-181 *"wherein the separating step includes separating the (control flow/data flow/one of the) graphs so as to minimize connections between the plurality of subgraphs)* without pointing out the text portions and figures which fully support these limitations.

Although the specification discloses *"minimum amount of signals between the two subgraphs"* (page 7, last paragraph and these limitations have been recited in claims 183), it does not disclose *"minimize connections between the plurality of subgraphs"* (emphasis added).

Under the principles of compact prosecution, claims 179-181 and 183-189 have been examined. The examiner respectfully requests the Applicants point out the specific text portions and figures, which fully support the newly added limitations in the next communications with the Office to avoid the 35 USC §112 first paragraph rejections over claims 179-181 and 183-189.

10. The Applicants added new claim 203 and stated, *"new claim 203 does not add any new matter and is fully supported by the present application, including the Specification"* (Remarks, page 21, lines 17-19).

Under the principles of compact prosecution, claim 203 has been examined. However, for a proper prosecution record, the examiner respectfully requests the Applicants point out specific text portions and figures, which fully support these limitations in the next communications with the Office.

11. In response to applicant's arguments, the recitation in claim 190 *"a single program on a system having an array of runtime reconfigurable cells"* and claim 194 *"a runtime reconfigurable array of cells"* have not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Claim Objections

12. Claims 179-181 and 203 are objected to because of minor informalities. Because claims 179-181 and 203 recite the limitations *"the separating step"* and *"the extracting step"*, respectively, the preamble should be - -A method for ..., comprising <u>steps of</u>:- -.

Appropriate correction is required.

Claim Rejections – 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 179, 181, 185, and 187-188 are rejected under 35 U.S.C. 102(e) as being unpatentable by Cooke (art of record, US Patent No. 5,966,534).

Claim 179:

Cooke discloses *a method for programming a system having a cellular structure* (e.g., col.5: 31-41), *comprising:*

extracting a control flow graph of a program (e.g., col.2: 60-64; col.6: 45-48);

separating the control flow graph into a plurality of subgraphs (e.g., col.2: 25-29; col.3: 23-26; col.6: 1-21); *and*

distributing the plurality of subgraphs among a plurality of programmable hardware modules (e.g., col.5: 31-49; col.6; 9-34 and 38-64);

wherein the separation step includes separating the control flow graph so as to minimize connections between the plurality of subgraphs (e.g., col.5: 31-41, no connections between the plurality of independent subgraphs; col.6: 9-18).

Claim 181:

Cooke discloses *a method for programming a system having a cellular structure, comprising:*

extracting from a program at least one of a data flow graph and a control flow graph (e.g., col.2: 60-64; col.6: 45-48);

separating the at least one of the graphs into a plurality of subgraphs (e.g., col.5: 31-41; col.2: 25-29; col.3: 23-26; col.6: 1-21); *and*

distributing the plurality of subgraphs among a plurality of hardware modules (e.g., col.3: 18-26; col.5: 31-49; col.6: 9-34 and 38-64);

wherein the separation step includes separating the at least one of the graphs so as to minimize connections between the plurality of subgraphs (e.g., col.5: 31-41, no connections between the plurality of independent subgraphs; col.6: 9-18).

Claim 185:

The rejection of base claim 181 is incorporated. Cooke also discloses *the separating step includes separating the at least one of the graphs into the plurality of subgraphs so that the subgraphs match resources of the hardware modules* (e.g., col.5: 16-24; col.6: 38-45).

Claim 187:

The rejection of base claim 181 is incorporated. Cooke also discloses *each of the plurality of subgraphs includes nodes, the method further comprising transmitting status signals between nodes within one of the subgraphs so that a state of each individual one of the nodes of the one of the subgraphs is available to each of the other nodes of the one of the subgraphs* (e.g., col.5: 50 – col.6: 8).

Claim 188:

The rejection of base claim 181 is incorporated. Cooke also discloses *each of the plurality of subgraphs includes nodes, the method further comprising transmitting status signals from a first node of at least one of the plurality of subgraphs to a higher-level*

unit adapted to control configuration of the plurality of hardware modules so as to trigger reconfiguration (e.g., col.5: 50 – col.6: 8).

15. Claim 179 is rejected under 35 U.S.C. 102(e) as being unpatentable by US Patent No. 5,857,097 to Henzinger et al. (art made of record, hereinafter "Henzinger").

Claim 179:

Henzinger discloses *a method for programming a system having a cellular structure, comprising:*

extracting *a control flow graph of a program* (e.g., FIG. 2, block 21, col.5: 5-30; block 203, col.5: 31-42);

separating the control flow graph into a plurality of subgraphs (e.g., FIG. 5a, col.7: 6-22); *and*

distributing the plurality of subgraphs among a plurality of programmable hardware modules (e.g., FIG. 1, col.3: 59 – col.4: 17);

wherein the separation step includes separating the control flow graph so as to minimize connections between the plurality of subgraphs (e.g., FIG. 5b, col.7: 32-37, see end result of step 541, no connections between two independent subgraphs).

16. Claims 190-193 are rejected under 35 U.S.C. 102(e) as being unpatentable by Kessler (art of record, US Patent No. 5,841,973).

Claim 190:

Kessler discloses *a method of executing a single program on a system having an array of runtime reconfigurable cells, comprising:*

transmitting a data signal from a first cell to a second cell (e.g., col.3: 14-22; FIG. 6, col.9: 7-32; col.8: 37-47); *and*

transmitting a status with the data signal, the status indicating whether the data signal is valid (e.g., FIG. 7, col.9: 19-42; col.13: 6-21).

Claim 191:

The rejection of base claim 190 is incorporated. Kessler also discloses *receiving a valid data signal at the second cell and acknowledging receipt of the valid data signal* (e.g., col.10: 41-47).

Claim 192:

The rejection of base claim 190 is incorporated. Kessler also discloses *transmitting by the second cell an indication that a signal is expected* (e.g., col.11: 65 – col.12: 3).

Claim 193:

The rejection of base claim 190 is incorporated. Kessler also discloses *transmitting by the first cell an indication that the first cell is transmitting the expected signal* (e.g., col.10: 48-54).

17. Claims 194-202 are rejected under 35 U.S.C. 102(e) as being unpatentable by US Patent No. 4,972,314 to Getzinger et al. (art made of record, hereinafter "Getzinger").

Claim 194:

Getzinger discloses *a method of executing a program on a runtime reconfigurable array of cells, the method comprising:*

forming a plurality of subgraphs based on a program (e.g., FIG. 5, col.5: 37-62; FIG. 7, col.14: 31 - col.15: 29);

computing a first part of a first one of the subgraphs with a first cell (e.g., FIG. 6, Node A, Instance 1 Consume; col.13: 55 – col.14: 30);

after the computing, reconfiguring the first cell for computation of a first part of a second one of the subgraphs (e.g., Node A, Instance 2 Consume, col.9: 11-28, col.16: 65 – col.7: 21); *and*

simultaneously with the reconfiguring, computing a second part of the first subgraph with a second cell (e.g., FIG. 6, Node A, Instance 2 Consume and Node B, Instance 1 Produce).

Claim 195:

The rejection of base claim 194 is incorporated. Getzinger also discloses *storing configurations for the first one of the subgraphs and the second one of the subgraphs configuration registers associated with the first cell* (e.g., FIG. 9, Graphic Processor Memory GPM, col.17: 22 - 59).

Claim 196:

The rejection of intervening claim 195 is incorporated. Getzinger also discloses *marking unconfigured ones the configuration registers as unconfigured* (e.g., col.28: 48 – col.29: 36).

Claim 197:

The rejection of base claim 194 is incorporated. Getzinger also discloses *selecting a configuration for the first cell based on a status signal generated by the cell structure* (e.g., FIG. 3, col.11: 60 – col.12: 30).

Claim 198:

The rejection of base claim 194 is incorporated. Getzinger also discloses *selecting a configuration for the first cell based on a status signal generated by a higher-level loading unit* (e.g., FIG. 2, col.7: 22 – col.8: 29).

Claim 199:

The rejection of base claim 194 is incorporated. Getzinger also discloses *selecting a configuration for the first cell based on an externally generated status signal* (e.g., FIG. 2, col.7: 22 – col.8: 29).

Claim 200:

The rejection of base claim 194 is incorporated. Getzinger also discloses *selecting a configuration for the first cell as a function of a present configuration of the first cell and a received status signal* (e.g., FIG. 3, col.11: 60 – col.12: 30).

Claim 201:

The rejection of base claim 194 is incorporated. Getzinger also discloses:

activating an unconfigured configuration register in the first cell (e.g., col.28: 48 – col.29: 36);

requesting a configuration from a higher-level load unit when the unconfigured configuration register is activated (e.g., col.7: 22 – col.8: 29); *and*

suspending execution of a subgraph until the requested configuration is fully loaded (e.g., FIG. 7, Graph Process Controller Functions, col.14: 31-66).

Claim 202:

The rejection of base claim 194 is incorporated. Getzinger also discloses *triggering a loading of a configuration of the first cell when a status signal generated by the cell structure received by the first cell* (e.g., col.9: 11-28).

18. Claim 194 is rejected under 35 U.S.C. 102(e) as being unpatentable by US Patent No. 7,007,096 to Lisitsa et al. (art made of record, hereinafter "Lisitsa").

Claim 194:

Lisitsa discloses *a method of executing a program on a runtime reconfigurable array of cells, the method comprising:*

forming a plurality of subgraphs based on a program (e.g., FIG. 4A, col.6: 12-61);

computing a first part of a first one of the subgraphs with a first cell (e.g., FIG. 4C, computing F419; FIG. 6A, col.8: 37 – col.9: 14);

after the computing, reconfiguring the first cell for computation of a first part of a second one of the subgraphs (e.g., FIG. 4C, reconfiguring and computing F411, F410, and F409, col.7: 25-60; FIG. 6A, col.9: 15 – col.10: 47; FIG. 6B, col.10: 48 – col.11: 12); *and*

> simultaneously with the reconfiguring, computing a second part of the first
subgraph with a second cell (e.g., computing a second part F420 to form F421; FIG.
6b, col.11: 13-37).

Claim Rejections – 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

20. Claim 180 is rejected under 35 U.S.C. 103(a) as being anticipated by Campbell (art
of record, US Patent No. 5,021,947) in view of US Patent No. 6,311,265 to Beckerle et
al. (art made of record, hereinafter "Beckerle").

Claim 180:

Campbell discloses *a method for programming a system having a cellular
structure* (e.g., col.13: 38-48), *comprising:*

> *extracting a data flow graph of a program* (e.g., FIG. 18, col.17: 1-26; FIG.
1, col.6: 13-16);

> *separating the data flow graph into a plurality of subgraphs* (e.g., FIG. 1,
col.6: 16-27; FIG. 17, col.16: 53-68); *and*

> *distributing the plurality of subgraphs among a plurality of hardware
modules* (e.g., col.1: 57 – col.2: 4; col.6: 10-31; col.7; 56-63; col.13: 38-48).

Campbell does not explicitly disclose *(the separating step includes separating the
data flow graph) so as to minimize connections between the plurality of subgraphs.*

However, in an analogous art, Beckerle further discloses *(the separating step
includes separating the data flow graph) so as to minimize connections between the
plurality of subgraphs* (e.g., FIG. 40D, 40E, 40F, no connections between the plurality of
independent subgraphs, col.26: 35 – col.27: 38).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Beckerle into that of Campbell. One would have been motivated to do so to easily program parallel computers to operate in a relatively efficient manner as suggested by Beckerle (e.g., col.2: 7-50).

21. Claims 183-184 and 186 are rejected under 35 U.S.C. 103(a) as being unpatentable by Cooke in view of Wuytack (art of record, US Patent No. 6,421,809).

Claim 183:

The rejection of base claim 181 is incorporated. Cooke does not explicitly disclose *the separating step includes separating the at least one the graphs into the plurality of subgraphs so that data transmission between the plurality of subgraphs is minimized.*

However, in an analogous art of parallel processing optimization (e.g., col.3: 2-8), Wuytack further discloses *the separating step includes separating the at least one the graphs into the plurality of subgraphs so that data transmission between the plurality of subgraphs is minimized* (e.g., col.7: 26-35; col.8: 24-32).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teachings of Wuytack into that of Cooke. One would have been motivated to do so to enhance the Cooke's method and optimize memory organization and data parallel access capabilities as suggested by Wuytack (e.g., col.2: 53 – col.3: 28).

Claim 184:

The rejection of base claim 181 is incorporated. Wuytack further discloses *the separating step includes separating the at least one of the graphs into the plurality of subgraphs so that no loop-back is obtained between the plurality of subgraphs* (e.g., col.14: 31-41; col.22: 6-27).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teachings of Wuytack into that of Cooke. One would have been motivated to do so as set forth above.

Claim 186:

The rejection of base claim 181 is incorporated. Wuytack further discloses *inserting memory elements between the plurality subgraphs, the memory elements adapted to save data passed between subgraphs* (e.g., col.3: 8-29; col.9: 66 – col.10: 14).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teachings of Wuytack into that of Cooke. One would have been motivated to do so as set forth above.

22. Claim 189 is rejected under 35 U.S.C. 103(a) as being unpatentable by Cooke in view of Maslennikov (art of record, US Patent No. 6,301,706).

Claim 189:

The rejection of base claim 181 is incorporated. Cooke does not explicitly disclose *the extracting step includes, for a conditional instruction, extracting a plurality of different subgraphs, each representing a different instruction path, one of the different subgraphs being executed depending on an evaluation of the conditional instruction.*

However, in an analogous art of optimizing parallel processing architectures (e.g., col.2: 13-16), Maslennikov discloses the extracting step includes, for a conditional instruction, extracting a plurality of different subgraphs, each representing a different instruction path, one of the different subgraphs being executed depending on an evaluation of the conditional instruction (e.g., col.2: 36-58).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teachings of Maslennikov into that of Cooke. One would have been motivated to do so to enhance the Cooke's system and reduce redundant speculative computations in the loop body as suggested by Maslennikov (e.g., col.2: 1-10).

23. Claim 203 rejected under 35 U.S.C. 103(a) as being anticipated by Cooke in view of Wuytack (art of record, US Patent No. 6,421,809).

Claim 203:

Cooke discloses *a method for programming a system having a cellular structure, comprising:*

extracting from a program at least one of a data flow graph and a control flow graph (e.g., col.2: 60-64; col.6: 45-48);

separating the at least one of the graphs into a plurality of subgraphs (e.g., col.5: 31-41; col.2: 25-29; col.3: 23-26; col.6: 1-21); *and*

distributing the plurality of subgraphs among a plurality of hardware modules (e.g., col.3: 18-26; col.5: 31-49; col.6: 9-34 and 38-64).

Cooke does not explicitly disclose *the extracting step includes, for a conditional instruction, extracting a plurality of different subgraphs, each representing a different instruction path of the conditional instruction; and for each one of the different subgraphs, execution of the subgraph is dependent on an evaluation of the conditional instruction.*

However, in an analogous art, Wuytack discloses:

the extracting step includes, for a conditional instruction, extracting a plurality of different subgraphs, each representing a different instruction path of the conditional instruction (e.g., FIG. 9A, col.22: 16-59; FIG. 12A, col.24: 64 – col.25: 65); *and*

for each one of the different subgraphs, execution of the subgraph is dependent on an evaluation of the conditional instruction (e.g., FIG. 9B, col.22: 16-59; FIG. 12B, col.24: 64 – col.25: 65).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Wuytack into that of Cooke. One would have been motivated to do so to optimize execution for real-time multi-dimensional applications and network applications with dynamically allocated data types as suggested by Wuytack (e.g., col.4: 52 – col.5: 2).

24. Claim 203 rejected under 35 U.S.C. 103(a) as being anticipated by Cooke in view of Maslennikov.

Claim 203:

Cooke discloses *a method for programming a system having a cellular structure, comprising:*

extracting from a program at least one of a data flow graph and a control flow graph (e.g., col.2: 60-64; col.6: 45-48);

separating the at least one of the graphs into a plurality of subgraphs (e.g., col.5: 31-41; col.2: 25-29; col.3: 23-26; col.6: 1-21); *and*

distributing the plurality of subgraphs among a plurality of hardware modules (e.g., col.3: 18-26; col.5: 31-49; col.6: 9-34 and 38-64).

Cooke does not explicitly disclose *the extracting step includes, for a conditional instruction, extracting a plurality of different subgraphs, each representing a different instruction path of the conditional instruction; and for each one of the different subgraphs, execution of the subgraph is dependent on an evaluation of the conditional instruction.*

However, in an analogous art, Maslennikov discloses:

the extracting step includes, for a conditional instruction, extracting a plurality of different subgraphs, each representing a different instruction path of the conditional instruction (e.g., col.2: 36-58; col.6: 49 – col.7: 26); *and*

for each one of the different subgraphs, execution of the subgraph is dependent on an evaluation of the conditional instruction (e.g., col.7: 27 – col.8: 10; col.9: 46 – col.10: 27).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Maslennikov into that of Cooke. One would have been motivated to do so to optimize execution in VLIW and other parallel processing architectures as suggested by Maslennikov (e.g., col.2: 1-35).

Conclusion

25. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

26. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone is (571) 272 8570. The examiner can normally be reached on Monday – Friday from 6:30AM to 3:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. Dao

TUAN DAM
SUPERVISORY PATENT EXAMINER